DRAFT
Meeting Summary
Quarterly DGDC/SMAC Meeting
9:00 a.m., August 8, 2002
Paradee Center
Dover, DE

Attendance List:
Connie Holland – State Planning Coord.
Kenneth McVicker – Del. National Guard
Paul Sample – Legislative Council
Doyle Tiller – Administrative Services, Facilities Management
Pete Gerardi – Administrative Services, Facilities Management
Tim Westbrook – New Castle County
Robert Madanat – New Castle County
Sandra Janowski – New Castle County
John Laznik – UD/CADSR
Dave Racca – UD/CADSR
Dick Sacher – UD/RDMS
John Callahan – UD/RDMS
Tina Callahan – UD/RDMS
Vern Svatos – UD/WRA
Jarrod Doucette – UD/WRA
Tracy DeLiberty – UD/Geography
Tripthi Mathews – Public Health
Mary Harper – SHPO
Pete Gerardi – Facilities Management
Jeff Bergstrom – City of New Castle
Mike Mahaffie – State Planning Coord.
Sandy Schenck – DGS
Lillian Wang – DGS
Dennis Murphy – DNREC
Mike Townshend – DNREC
Tripp Fischer – DNREC
Debbie Sullivan – DNREC
Miriam Pomilio – State Parks
Shelly McCoy – UD, Library
Kevin Neilson – Public Service Commission
Vince Rucinski – DelDOT
Joseph M. Watson – DTC
Peter Owosu-Donkor – Dover/Kent MPO
Roger Barlow – USGS-ERG

Welcome and Introductions

Mike Mahaffie began the meeting at 9:20 a.m. He asked each person present to introduce themselves to the group.

Information Updates

A Mapping Partnership Office
Roger Barlow and Sandy Schenck made the joint announcement that the USGS has plans to establish a one-person Mapping Partnership Office (MPO) in Delaware. USGS will have funding for one full time employee and the Delaware Geological Survey (DGS) will help provide office space. Locating the USGS MPO at DGS will help tie the MPO staff person into the DataMIL team. The MPO will give USGS a person in Delaware to handle data updates for those parts of the state Framework that are federal. The location will also enhance the ability to use students as interns and assistants. The funding starts in Federal FY03 (Oct. 1).

National Hydrography Dataset Update: Another Bite
Roger Barlow delivered a Memorandum of Agreement (MOA) between DGS and USGS to provide for completion of the National Hydrography Dataset (NHD) for a sub-basin that includes much of eastern Delaware. NHD work for northern Delaware has been completed as part of a project looking at the Delaware River Basin. The western portion of the state is expected to be covered as part of a project looking at the Chesapeake Bay Region. The remainder of the state lies in a sub-basin that is expected to be completed in partnership with Maryland and Virginia, when funding concerns in those states can be worked out. Funding for the eastern Delaware work will come from the federal

government and the Delaware Department of Natural Resources. Congratulations to Sandy Schenck for bringing this project together.

Framework MOA's
Mike Mahaffie explained that he is still working to get Memoranda of Agreement (MOA's) signed among of the various data stewards for the Delaware Spatial Data Framework. Mike Announced that the first of the MOA's – for the Land Use/Land Cover data set -- was ready to be signed. He further explained that this one was finished first because is involves only the Office of State Planning Coordination and the Delaware Spatial Data I-Team. Mike Signed on behalf of the Office and Connie Holland signed as chair of the I-Team. Mike noted that the text of the MOA (attached) will be posted on the web site in the next few days.

2003 Delaware GIS Conference
John Callahan, leader of the Conference Planning Group, announced that the group is already working on plans for the 2003 Conference and that the group is targeting late March or early April and is considering both the University of Delaware's Clayton Hall and the new hotel at Dover Downs as possible sites. It is likely that the main sponsors of the Conference will be The University of Delaware Information Technologies, Delaware Geological Survey, and the Office of State Planning Coordination. Anyone interested in helping out should contact John, at diodata@udel.edu.

OrthoImagery Update
Mike Mahaffie reported that the 2002 Statewide Digital orthophotography project is generally on schedule. The photography has been collected and scanned. The vendor is now working on aerotriangulation.

The project calls for a small pilot area to be used to balance and calibrate the production of orthos. The original scope of work had considered using Dover as the pilot area. However, the state has asked that ortho production begin in southeastern Sussex and work north and the vendor has pointed out that using Dover as a pilot area will not provide helpful information for starting in southeastern Sussex. It has been agreed therefore, to use an area between Lewes and Rehoboth, along Route 1, as the pilot area.

Pilot area data will be available in late November and will need to be tested vigorously by all users. In addition, Mike and Sandy Schenck will work with the vendor to better define QA/QC processes. It was suggested that the Counties and USGS might be called on to help with QA/QC.

GIS Day
Mike Mahaffie reported that he would like to consider a Poster Session during Geography Week in November to mark GIS Day. Early thoughts are to reserve space within Legislative Hall for a poster presentation. It was also suggested that posters be presented in the lobbies of the three county government centers. Other possible sites

might be the State Archives, and public libraries. A volunteer will be needed to coordinate this effort. Volunteers should contact Mike at mike.mahaffie@state.de.us.

DataMIL Training Opportunity
Sandy Schenck announced that he plans to give colloquium on the use of the DataMIL at the Delaware Geological Survey on August 9. He noted that interested members of the GIS Community were welcome and that there will be other such training opportunities. Mike Mahaffie added that there are speakers and presentations on the DataMIL available for any audience from luddites to GIS power-users. Anyone interested in hosting a session, or who has an audience to suggest, should contact any member of the DataMIL Team.

Elevation Data Update
Mike Mahaffie noted that the Elevation Data Working Group is still active and planned to meet following the DGDC/SMAC meeting to explore ways to collect LIDAR data statewide and potentially peninsula-wide.

Modified Grid/Traffic Analysis Zones

John Laznik, of the UD Center for applied Demography and Survey Research gave a presentation (attached) on the history and status of the Modified Grid and the Traffic Analysis Zones (TAZ). John explained that these two versions of geography dated from the 1960's and grew out of transportation planning efforts. They now are used by the Department of Transportation and by the two Metropolitan Planning Organizations (MPO's), WILMAPCO and the Dover/Kent Co. MPO.

The Modified Grid and TAZ's provide stable geographies for long term demographic analysis and help overcome problems caused by changes in Census geography from decennial census to decennial census.

WILMAPCO has taken ownership of the TAZ's for New Castle County and has established an update procedure, which is recommended for adoption in the rest of the state. Peter Owosu-Donkor noted that the Dover/Kent MPO can take ownership of TAZ's in Kent. It may be the case that Sussex County can take own its own TAZ's, though it does not have an MPO. It will be necessary to determine ownership of the Modified Grid, though the logical owner should probably be DelDOT.

A Modified Grid/TAZ Working Group will be formed to include Mike Mahaffie, Sandy Schenck, John Laznik, representatives of the three counties, the MPO's, and DelDOT.

Discussion: Delaware Marginalia

Sandy Schenck led a discussion on what items of information should be in the margins of the Large Format Map Printouts from DataMIL. The DataMIL is designed to provide down-loadable and printable "digital topo" maps that will replace the old topographic map series. Sandy is looking for guidance on what those maps should look like. He

asked for interested members of the Community to join in a working group. Mike Mahaffie and Sandra Janowski volunteered. Others interested should contact Sandy at rockman@udel.edu.

Publishing GIS Data in Delaware: Tools and Techniques

John Callahan gave a presentation on publishing spatial data in Delaware. He used several slides from a power point presentation (entire presentation attached) and demonstrated aspects of the Delaware Metadata Explorer within the Delaware Spatial Data Clearinghouse (www.nsdi.udel.edu) live on-line.

John noted that it is not only GIS data files that can and should be published via the Clearinghouse. He said that spatial-data-related images, map services, documents, web sites, contract services and other spatial information can be published using the Clearinghouse. He explained that the clearinghouse is a repository of information about these information and data resources – information about information, AKA metadata.

John noted that there are several methods to use to create, publish and maintain metadata on the Delaware Clearinghouse.

The clearinghouse is now enabled to use the ArcIMS Metadata Server. Those creating and maintaining metadata in the ArcGIS 8.x ArcCatalog can get accounts and passwords that will allow them to “drag and drop” their metadata within the ArcCatalog.

If users prefer, they can use the Delaware Internet-based Metadata Entry system (DIME) which many users have come to prefer. Others, who create and maintain metadata using other products, can e-mail finished metadata files to RDMS staff and it will be posted for them.

John noted that metadata will need to meet the minimum FGDC standard and will need to include five specific tags (mostly needed to meet the FGDC standard) to work within the Metadata Explorer. John noted that explanations of the needed tags will be posted on the Clearinghouse web site.

The meeting concluded with an admonition from Mike Mahaffie that the members of the Delaware GIS Community are duty-bound to publish GIS data about their datasets and data and information resources. John Callahan and RDMS staff are available to help make that easier. There is now no excuse not to publish metadata and data.

Wrap Up

The meeting adjourned at approximately 12:15 p.m.

Memorandum of Agreement

Between
The Delaware Office of State Planning Coordination (OSPC),

And

The Delaware Spatial Data Implementation Team (I-Team)

To

Establish data stewardship and a strategy for the improvement and integration of the Land Use and Land Cover portion of the Delaware Spatial Data Framework (Framework).

WHEREAS, data that can be analyzed in a spatial context – also known as geographically referenced data – is essential to planning and operations in many levels of government and in the private sector; and

WHEREAS, these data sets can be expensive – in time, money, and other ways – to produce and maintain; and

WHEREAS, it is in the interest of the people of the State of Delaware to avoid the waste of time and money caused when different levels of government, or different agencies, duplicate the creation of the same sets of data; and

WHEREAS, Delaware recognizes the utility of ensuring that spatial datasets are created and maintained at the most logical level of government; and

WHEREAS, Delaware understands that spatial data must be fully shared and integrated to reap the full value of spatially referenced information; and

WHEREAS, a functioning, shared framework approach will save time and money for all data users; and

WHEREAS, the Delaware Spatial Data Framework provides the basic data “skeleton” needed by users of Geographic Information Systems (GIS) throughout Delaware; and

WHEREAS, the data sets that make up the Framework must be as accurate and up to date as possible, form a common base map, adhere to common data standards, and be shared among all GIS users in the State; and

WHEREAS, metadata is considered an integral part of each of the data sets that make up the Framework; and

WHEREAS, complete metadata about all of the data sets that make up the Framework must be created, published, and maintained and must adhere to federal metadata standards; and

WHEREAS, the Delaware Data Mapping and Integration Laboratory (DataMIL) provides an on-line collaboratory in which data stewards, data users, and the public, can continually improve, through interactive use, all parts of the Delaware Framework; and

WHEREAS, data stewards must be identified to take ownership of, and provide data maintenance for, all parts of the Delaware Framework, and

WHEREAS, the Delaware DataMIL Team is comprised of members from the USGS, the DGS, the University of Delaware Research and Data Management Services (RDMS), the Delaware I-Team, and data stewards identified for each of the Delaware Framework layers; and

WHEREAS, the Land Use and Land Cover portion of the Framework is currently made up of 1997 Land Use/Land Cover (LULC) data set maintained by the Delaware Office of State Planning Coordination (OSPC);

NOW THEREFORE WE, the UNDERSIGNED,

AGREE that the existing 1997 LULC data set is the best currently available statewide data set depicting Land Use and Land Cover in Delaware; and

AGREE that the 2002 LULC data set, now in process, will replace the 1997 LULC data set as the Land Use and Land Cover portion of the Delaware Spatial Data Framework; and

AGREE that the OSPC is the data steward for the existing LULC data set and for future updates of a LULC data set as found in the Delaware Spatial Data Framework; and

AGREE that comprehensive updates to the LULC data set will be included, whenever possible, in future orthographic aerial or satellite imagery collection projects by the I-Team; and

AGREE that the I-Team will seek a process by which portions of the LULC data set can be updated in interim periods between orthographic aerial or satellite imagery collection projects; and

AGREE to work with other members of the Delaware DataMIL Team to publish spatial data and metadata for the data sets that make up the Land Use and Land Cover portion of the Framework.

This agreement is effective upon signature by the parties, and is valid until rescinded. It may be amended by mutual agreement or rescinded by any of the parties at any time during the effective period with 60 days written notice.

SIGNED HERETOFORE,

For The Delaware Office of State Planning Coordination

Michael B. Mahaffie 8/8/02
Principal Planner, Delaware Office of State Planning Coordination

For The Delaware Spatial Data Implementation Team

Constance Holland 8/8/02
Director, Office of State Planning Coordination

Modified Grids & Traffic Analysis Zones

John Laznik
The Center for Applied Demography and Survey Research

Origin: Grids and Taz's

- Early 1960's
- Delaware Department of Transporatation
- Grid system that made sense
- Control of boundaries
- Remain stable over time
- USGS Quad's

Grids/Taz's vs Census Demographics

U.S. Census 2000

State	= 1
County	= 3
Place	= 78
Planning Districts	= 27
Census Tracts	= 197
Block Groups	= 502
Blocks	=17483

Layers from 2002

Traffic Analysis Zones	= 526
- New Castle	= 321
- Kent	= 98
- Sussex	= 107
Modified Grids	= 2303
- New Castle	= 981
- Kent	= 585
- Sussex	= 737

Steps for creating Grids: New Castle County only

- Obtain source maps,databases and GIS layers

DelDOT, CADSR, Wilmapco and NCC Land Use Dept.

- Cross reference all source materials
- Create line features from NCC and DelDOT digital sources

- Hundred Boundaries
- Municipal and County Boundaries (2/2/00)
- Parcels
- Roads and Railroads
- Streams
- Hand

Steps for creating TAZ's: New Castle County only

- Obtain source maps,databases and GIS layers

DelDOT, CADSR, Wilmapco and NCC Land Use Dept.

- Cross reference all source materials including numerous splits from 204, 228, 314, 343 and 322
- Dissolve on modgrid layer with taz attributes to form new layer
- History of TAZ available

Update procedures for Grids/TAZ's

Traffic Analysis Zones

[every 3 years- March 2002]

1. Agency amendment Submission
2. Subcommittee Review
3. Subcommittee Recommendation to TAC
4. TAC Approval
5. Wilmapco Council Approval
6. Distribution of New TAZ Configuration

Modified Grids

[no official procedure]

1988-Splits are a result of annexations by incorporated places or for reasons of accommodation. In an instance of accommodation, for example, there may be a desire to make modified grids co-terminus with other geography such as census tracts.

i.e. Route 1 split.

1. Parent stays same with suffix of 1
2. Child stays same with suffix of 2…
3. Number of suffix determines number of splits

Reasons for maintenance of layers

- Federal requirements for Area Planning Councils

[every 3 years- March 2002]

- Transportation improvement
- Air quality conformity
- Long term projection of infrastructure and costs

- Travel Demand Model - DelDOT
- Population projections
- Employment projections
- Occupied housing
- Business generation trips

Conclusion:

- Seamless environment – parcels, grids & taz's

- New Castle County only

- Geometry remains stable over time

- Standards

- modified grids 8 character

- traffic analysis zones 4 character

- Modgrid updates every 3 years? Less? More? Who maintains? Increase in annexation?

Publishing GeoSpatial Data In Delaware

DGDC Meeting

August 8, 2002

Outline

- National Spatial Data Infrastructure (NSDI)
- Delaware NSDI Clearinghouse
- How to Search
  - Delaware Metadata Explorer Demo
- How To Create and Publish
  - DIME and ArcCatalog Demo
- Discussion

National Spatial Data Infrastructure

"defined as the technologies, policies, and people necessary to promote sharing of geospatial data throughout all levels of government, the private and non-profit sectors, and the academic community."

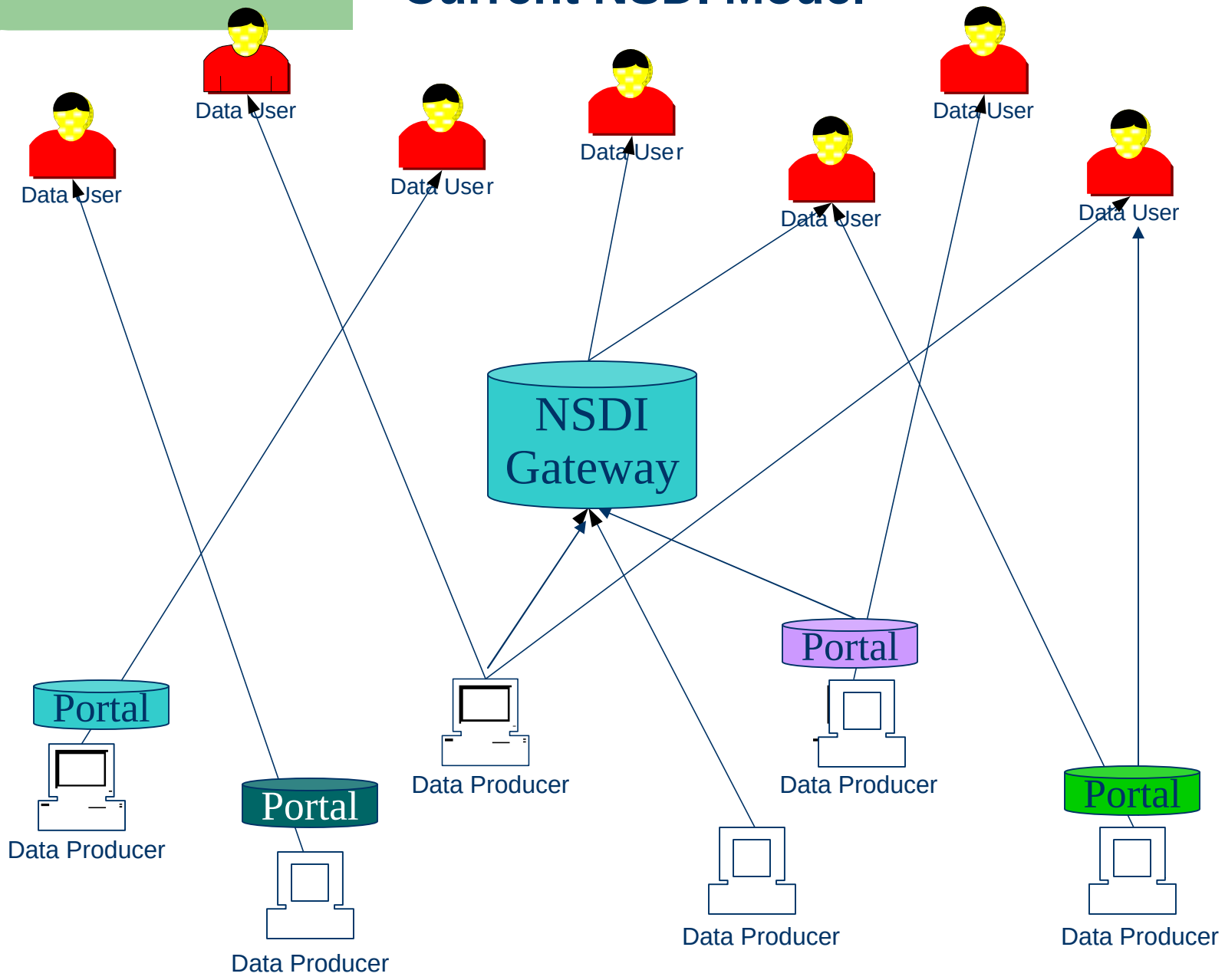
Executive Order 12906

April 1994

National Spatial Data Infrastructure

- NSDI Metadata Clearinghouses
  - About 250 Servers Worldwide
- FGDC Metadata Standard (CSDGM V2)
- Framework Data Content
- Interoperability Specifications (OGC, Z39.50)
- Partnerships (Spatial Data I-Teams)
- Other Financial and Institutional Components

Current NSDI Model

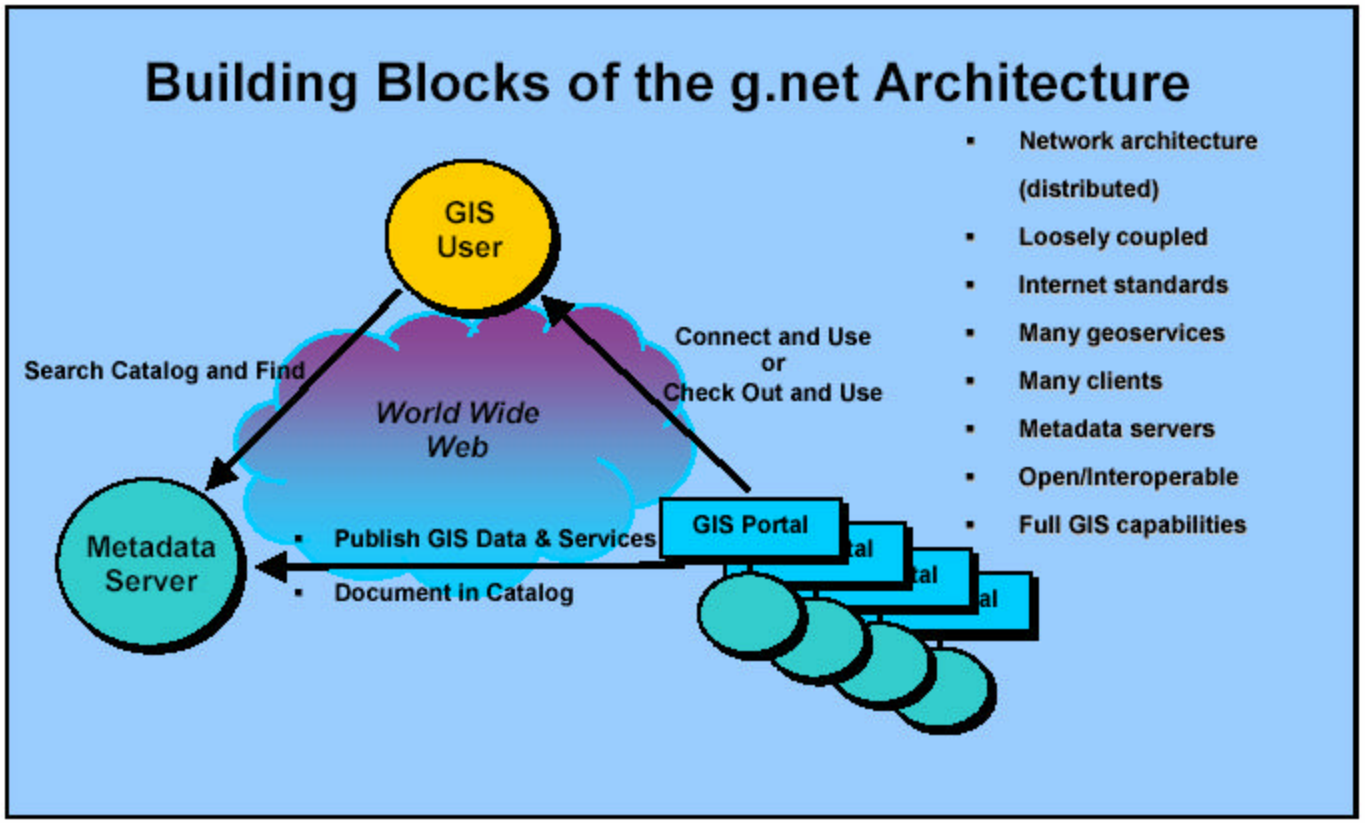


Next Generation NSDI

- GeoSpatial One-Stop (OMB, FGDC)
  - http://www.fgdc.gov/geo-one-stop/
- The National Map (USGS)
  - http://nationalmap.usgs.gov/
- Geography Network (ESRI)
  - http://www.geographynetwork.com

Web Services (mapping, metadata, LBS, routing, etc…)

Geography Network



Delaware's Role in National Programs

- Delaware NSDI Clearinghouse
- Delaware Spatial Data Framework
- Active DGDC and I-Team
- The Delaware DataMIL is the leading pilot project for The National Map
- Recognized by ESRI as a leading participant in building a State Geography Network
- Beginning talks with GeoSpatial One Stop

Delaware NSDI Clearinghouse

- Established in 1997 by Research & Data Management Services and Center for Applied Demography and Survey Research at the University of Delaware under FGDC CAP grant
- Currently being reorganized and technology re-evaluated

Delaware NSDI Clearinghouse

- Clearinghouse for GeoSpatial Metadata
  - GIS Data Files, online or offline
  - Web and GIS Services
  - Documents and URLs
- Geographic coverage within Delaware
- Populated largely by Delaware and Federal data producing agencies

Delaware NSDI Clearinghouse

- ArcIMS 4.0 Metadata Server
- Supports FGDC CSDGM (V2 1998) Standard and ISO Standard
- Accepts ArcXML and Z39.50 requests
- Server: Oracle and ArcSDE
- Client: Delaware Metadata Explorer
  - Web-based Java Server Page application

Delaware NSDI Clearinghouse

- Delaware Metadata Explorer Demonstration

http://www.nsdi.udel.edu/

Creating Metadata

- mp, cns
- CorpsMet-95
- SMMS
- ArcView Metadata Collector
- ArcCatalog
- DIME
- Many other metadata creation/editing software available

Publishing Spatial Data

- Placing a metadata entry about a particular geographic service, data file, or document in the Delaware NSDI Clearinghouse
- This information can be searched by various clients connected to the Clearinghouse
  - FGDC Clearinghouse Gateway
  - Delaware Metadata Explorer
  - ArcCatalog
  - Any client capable of sending Z39.50 or ArcXML requests

Publishing Requirements

- Title
  `<idinfo – citation – citeinfo – title>`
- Publisher
  `<idinfo – citation – citeinfo – pubinfo – publish>`
- Spatial Extent
  `<idinfo - spdom – bounding – eastbc…>`
- Theme
  `<idinfo – keywords – theme>`
- Content Type
  `<distinfo – resdesc>`

Delaware Internet-based Metadata Entry System (DIME)

- Web based; all files on server
- Complies with FGDC minimum standards
- Directly sent to RDMS
- Limitations
  - sections 1 and 7 only
  - Files must remain on server
  - Manual editing to include ArcIMS required tags
  - Manual publishing to ArcIMS Metadata Server

ArcCatalog

- Using ArcCatalog 8.2, users can drag-n-drop metadata they create onto the Delaware Metadata Service.
- Data files, services, etc…
- Immediately available, automatic indexing
- Requires 5 tags to publish
  - Does not need to be FGDC compliant!

Current Recommendations

- **ArcCatalog users**: create metadata with five ArcIMS-required tags and FGDC minimum;copy directly to Delaware Metadata Service
- **Non-ArcCatalog users**: use metadata creation tool (DIME, CorpsMet-95), comply with FGDC minimum standards, send XML file to RDMS
- Other possibilities?

Demonstrations

- DIME
  - Creating Metadata
- ArcCatalog 8.2
  - Creating Metadata
  - Searching Delaware Clearinghouse
  - Publishing Metadata

Discussion

- Methods of Searching
  - Delaware ME, ArcCatalog
  - Folder Options (Subject vs. Organization)
- Metadata Creation and Maintenance
- Publishing Using ArcCatalog
- Publishing with Non-ESRI Products
  - DIME?
  - Web based upload?

Delaware Metadata Contacts

- Delaware Spatial Data Clearinghouse web
  - http://www.nsdi.udel.edu/
- RDMS Staff
  - Christina Callahan, tinytina@udel.edu
  - John Callahan, diodata@udel.edu
  - Richard Sacher, dsacher@udel.edu